



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,744	09/11/2006	Bartłomiej Jan Pawlak	NLO40280	9792
65913	7550	08/15/2008		
NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER FOURSON III, GEORGE R	
			ART UNIT 2823	PAPER NUMBER
			NOTIFICATION DATE 08/15/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/598,744

Applicant(s)

PAWLAK, BARTLOMIEJ JAN

Examiner

George Fourson

Art Unit

2823

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-20 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☒ Claim(s) 3 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The finality of the office action mailed 7/8/08 is withdrawn in view of the new grounds of rejection below.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1,2 and 4-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keys et al 2004/0235280.

There is now seen to be a distinction between "inert atoms" and "dopant" or "temporary dopant" which is that inert ions do not interact with interstitial sites.

Keys et al discloses formation of a p-type or n-type transistor [0035, figures 5A and 5B and accompanying description] including implanting Si or Ge ions to amorphize a portion of an n-doped substrate region [0024], implanting F temporary dopant [0025-0026], annealing at 400-800°C for 5-120 seconds [0028] and implanting boron ions [0027] wherein the annealing step is performed either before or after implantation of boron (See figure 3). The recited annealing temperature range overlaps the disclosed range (MPEP 2144.05). The claims do not exclude the further annealing step at 310 of figure 3, for example.

With respect to claim 4, LDD formation is shown in figures 5A and 5B. With respect to claim 7, there is overlap between the recited duration and that disclosed [0028].

With respect to claim 10, the anneal inherently is performed as recited because the same materials are treated in the same manner as in the instant invention.

Applicant argues that there is no alleged difference to necessitate rejection under 35 USC § 103. However, the rejection is made under 35 USC § 103 because the claimed annealing temperature range overlaps the disclosed range instead of being anticipated by the disclosed range.

Applicant argues that overlap of the annealing temperature and annealing time ranges is not sufficient. However, applicant does not allege unexpected results for the claimed ranges and therefor does not point to objective evidence supporting an allegation of unexpected results. It is noted that the ranges disclosed at instant page 6, first paragraph, are completely contained within the disclosed range of Keys et al. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

The following is an examiner's statement of reasons for allowance: With respect to claim 3, Keys et al fails to disclose or suggest a low temperature anneal between the F and B implantation steps. With respect to claims 12-20, Keys et al discloses a high temperature anneal as necessary to "recover the amorphous region" and to form "a pn-junction" as recited (see figure 3 and col.6, lines 1-8).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Fourson whose telephone number is (571) 272-1860. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith, can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/George Fourson/
Primary Examiner, Art Unit 2823

GFourson
August 13, 2008